



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,732	02/26/2002	Hiroaki Nemoto	ASA-1074	3964
24956	7590	06/07/2006	EXAMINER	
MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C. 1800 DIAGONAL ROAD SUITE 370 ALEXANDRIA, VA 22314				PSITOS, ARISTOTELIS M
ART UNIT		PAPER NUMBER		
		2627		

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/069,732	NEMOTO ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Aristotelis M. Psitos	2627

**- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 06 April 2006.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-9,12 and 13 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-9,12 and 13 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date .  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_ .

Art Unit: 2627

**DETAILED ACTION*****Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/6/06 has been entered.

***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 4/6/06 has been received. The examiner is considering the information disclosure statement.

***Drawings***

Figure 16 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The examiner has reviewed the disclosure and as interpreted, this figure represents the prior art status. If this is incorrect, applicants' discussion thereof would be greatly appreciated.

***Specification***

Claims 1-9, 12 and 13 are objected to because of the following informalities:

The examiner cannot readily map the newly introduced phraseology with respect to the curve of the thermal distribution, as recited in the independent claims 1, 2, and 3 with the remainder of the specification as originally filed. Although no new matter rejection is presented, absent an appropriate correction/discussion, such a position would be introduced in any subsequent OA. Appropriate response is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

1. Claims 1-2,7-9 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following analysis/problems exist:

a) With respect to claims 1,12 and 2,7-9: as now recited, the ultimate paragraph of claim 1 recites a desired result, however as discussed in applicants' communication of 4/6/06 such a result is a result of more than just the steps recited in claim 1. Since as discussed on page 9 of the above communication, detailing figure 6 of the disclosure is not found in claims 1 and 2, these claims fail accordingly. Furthermore, with respect to claim 7, this recites a desired ability, but fails to positively recite the test writing and reading.

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 11-096608. The US patent to Nakajima et al (6317280) is the US equivalent and relied upon in the rejection below.

The following analysis is made:

Art Unit: 2627

claim 1

Nakajima et al

An information recording/reproducing  
method, comprising the steps of:

see title/abstract

partially heating a recording medium to form  
a magnetic domain whose magnetic wall  
is along a curve of the thermal distribution  
of the partially heated region in a magnetic  
recording medium, while applying a magnetic  
field to the vicinity of the partially heated region, and

see figs. 13/14 and their  
description

scanning the recording medium so that a magnetic  
flux from the magnetic domain is detected to  
reproduce by a magnetic flux detecting means,

see fig. 14 and its  
description

wherein an orientation of the magnetic domain is aligned  
with respect to the longitudinal direction of the magnetic  
flux detecting means in accordance with the position  
of the recording.

follows

As far as the examiner can ascertain from the above noted figures and their associated disclosure, the claimed steps of claim 1 are present.

If applicants can convince the examiner that such is not true, the claims would be rejected under 112 (paragraph two) as failing to particularly point out and distinctly claim the invention since the resultant claimed is not attributed to the limitations positively recited in the claim as it stands.

Art Unit: 2627

With respect to claim 12, such is considered present in the above system.

3. Claims 1 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by the acknowledged prior art of figures 1-3.

As described with respect to these figures, there is alignment between the orientation of the magnetic domain with respect to the longitudinal direction of the flux detecting means in accordance with the position of recording. This terminology does not distinguish over the prior arts description of figure 3.

#### ***Response to Arguments***

Applicant's arguments filed 4/6/06 have been fully considered but they are not persuasive. The examiner maintains the previous position. If the above art does not perform the desired function, the system would not be able to record/reproduce any information.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over either the acknowledged prior art of figures 1-3 of the above noted JP system as relied upon in paragraph 1 further considered with Lee et al.

The following analysis is made:

Claim 2	Either the acknowledge prior art/fig. 1 JP/US Nakajima et al system/see Identification as noted above see title/abstract
An information recording/reproducing apparatus for storing information with a magnetic domain in a magnetic recording layer formed on a substrate of a recording medium, comprising,	

heating means

for heating partially the magnetic recording  
layer,

heating means present - see

figure 1, head 4 – col. 6 lines

15-55

magnetic field applying means for applying a  
magnetic field to the vicinity of an area heated by the  
heating means, and

such present fig. 1

head 2

magnetic flux generating means for detecting a  
magnetic flux with scanning on the recording medium,

such present fig. 1

head 3

wherein the magnetic domain is formed so that

the magnetic domain wall is along a curve of the thermal distribution

of the region heated by the heating means, and a

difference between a radial position

see secondary reference

of the heating means when heating partially the

recording medium to form the magnetic

domain and a radial position of the magnetic flux

detecting means when detecting the magnetic flux

generated by the magnetic domain is

changed so that a magnetic wall orientation of the

magnetic domain is formed along a

longitudinal direction of the

magnetic flux detecting means.

Art Unit: 2627

The examiner interprets the wherein clause as recited desired result(s) that occur/flow from the elements positively recited, else the claims would be incomplete – see the above problem with respect to 112 paragraph 2.

As noted in the above analysis, the JP/US system to Nakajima et al provides for the overall structure recited in claim 2, with the exception of the ultimate paragraph.

With respect to the wherein clause – as further discussed in Lee et al, the ability of reducing the skew effects so that the optical axis of an optical transducing element is in alignment with the radial position along a disc is taught – see the discussion with respect to figure 3 for instance.

It would have been obvious to modify the base system of the acknowledged prior art/Nakajima so that there is an alignment between the magnetic domain and the appropriate magnetic flux detecting element.

#### ***Response to Arguments***

Applicant's arguments with respect to the claim have been considered but are moot in view of the new ground(s) of rejection.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Novotny et al considered with either Lee et al or Luecke.

Novotny et al discloses an magneto-optic recording system having the appropriate heating, magnetic generating and mag. Flux detecting elements/means – see either figure 1 or figure 6 and the discussion thereof.

With respect to the wherein clause as now recited, either of the secondary references teach in this environment, the ability of reducing the skew between a transducer and the position of the recording track as it proceeds/traces along the path across the disc – see the discussion with respect to figures 2 and 3 in Lee et al and figures 2-6 in Luecke.

It would have been obvious to modify the base system of Novotny et al with the above teaching from either of the secondary systems, motivation is to reduce the overall effects of skew upon a rec/repr. transducer and hence increase the proper decoding of the information.

Art Unit: 2627

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 2 above, and further in view of JP 05-298737.

The ability of having a test-write and test read in this environment is taught by the JP reference to Kirino et al – see the abstract for instance.

It would have been obvious to modify the base system as relied upon with respect to claim 2 in paragraphs 4 and/or 5 with the additional teaching from the JP document, motivation is to provide for the reduction as stated in the abstract of the JP document.

***Response to Arguments***

Applicant's arguments with respect to the claim have been considered but are moot in view of the new ground(s) of rejection.

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 2 above, and further in view of Yonezawa et al.

As interpreted by the examiner, the limitation of claim 8 is disclosed in the application as being present in the Yonezawa et al system.

It would have been obvious to modify the base system as relied upon above with respect to claim 2 as stated in paragraphs 4 and or 5 above, motivation is to provide for the appropriate servo capability.

With respect to the limitation of claim 9:

“characterized in that an angle of the recess-and-projection structure with respect to the track direction is substantially in accord with an angle of the magnetic flux detecting means with respect to the track direction, at each position on the recording medium “. Such occurs when the system operates in order to record the appropriate servo.

8. Claims 3-5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belser et al further considered with either Lee et al or Luecke.

Art Unit: 2627

Belser et al discloses in the magneto-optic environment the appropriate hardware – see the discussion with respect to figure 1 for instance, which depicts the heat source, the mag. Generating field and mag. Flux detecting element as well as the swing-arm shaped supporting portion.

Either of the secondary references teaches in this environment, the ability to reduce the skew between the transducer and the record medium. Hence, with respect to the wherein clause – such is interpreted as an obvious modification of the Belser et al system so as to reduce the skew error/off

With respect to claims 4, 5, 6 and 13 such functional limitations flow from the above modified system.

***Response to Arguments***

Applicant's arguments with respect to this claim have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M. Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-F: 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Aristotelis M Psitos  
Primary Examiner

